

Who Does What?

Grade Level	Ninth
Minimum Time Required	90 Minutes
Materials/Resources	Copy of Who Does What? (Handout)
Subject Area(s)	Science Guidance Health

Project Description:

1. Ask students what they know about careers in medicine. Have students brainstorm all the different medical jobs they know of, and list all suggestions on the board. Ask how many students would or have ever considered a medical career, and which ones.
2. To help students become acquainted with the many types of jobs a medical career offers, give each student a copy of the "Who Does What?" activity sheet. It's likely that the sheet contains jobs the students have never heard of or considered.
3. Have students do the matching portion of the activity sheet. They may need to use the dictionary or the Internet to clarify the meanings of some medical terms, such as aneurysm, sinusitis, and catheterization.
4. Once everyone is finished, have students review all the careers on the list and choose the one that they think requires the most training and the one that requires the least.
5. Now provide students with the "Who Does What?" Answer Key. Have a discussion with students about the jobs they didn't know about. Which career descriptions were the biggest surprise?
6. Review with students the amount of training that each career requires. How accurate were students' predictions? Which career surprised them most in terms of its required study and practice?
7. To conclude the lesson, ask students again if they would consider, a medical career. Did any students change their minds? If so, why? If not, why not?
8. As an extension, have students choose one of the medical careers that interests them most and do additional research on that career. What skills are required to be successful? What kind of lifestyle does the career offer in terms of work hours, compensation, and benefits?

Career Development Standard	Skills to locate, evaluate, and interpret career information
Career Development Indicator	Demonstrate use of a range of resources (e.g. handbooks, career materials, labor market information, and computerized career information delivery systems). Demonstrate knowledge of various classification systems that categorize occupations and industries (e.g. Dictionary of Occupational Titles).
Delivery Level	Review
Academic Standards	
Language Arts	1.1.c use prior knowledge and experience to interpret, evaluate, and construct meaning from various texts. 1.4.a access and use multiple information sources for a variety of purposes, e.g., Internet, CD-ROM, print materials, video materials, library. 1.4.c compile and synthesize information to make reasonable and informed decisions. 2.4.a write to clarify thinking and what is known about various topics. 2.4.b write to analyze, synthesize, interpret, and use new information. 2.4.c use multiple examples from print and electronic sources to support personal interpretations.
Employability/SCANS Skills	Basic Skills Thinking Skills Resources Information
Assessment/Rubric	Students will be evaluated based upon the writing rubric.

Submitted by: Peg Holmquist, Watertown High School

Who Does What?

Resources:

Books

Marion, Robert

Learning to Play God: The Coming of Age of a Young Doctor.

New York. NY: Fawcett Books, April 1993.

Draws from the authors' experiences as medical student, intern, and resident to recreate the often brutal process of medical training.

Murray, John F.

Intensive Care: A Doctor's Journal.

Berkeley, CA: University of California Press, May 2000.

Recounts a month events in the intensive care unit of San Francisco General Hospital, Murray, Chief of the Pulmonary and Critical Care Division there, reveals the complexity and stress of a hospital units day-to-day operation.

Web Sites

NOVA On-line-Survivor MD

[www. pbs.org/nova/doctors](http://www.pbs.org/nova/doctors)

Provides program-related articles, interviews interactive activities, resources, and more.

Career Exploration

career.berkeley.edu/CareerExp/careerexpself.stm

Helps students evaluate career options with surveys that match personal interests, skills, values, temperament, and work style preferences with occupations.

Health Care Career Information

hml.org/CHIS/career.html

Gives background on dozens of health care careers from chiropractor to midwife, and from veterinarian to psychologist. Links to a U.S. Department of Labor site called "Jobs for Kids Who Like Science. "

Student Doctor Network's Big Guide to Medical School

[www studentdoctor.net/guide/index.html](http://www.studentdoctor.net/guide/index.html)

Provides information specifically for high school students on why someone would consider being a doctor; on classes to take and grades to aim for; and on additional medical careers.

WHO DOES WHAT?

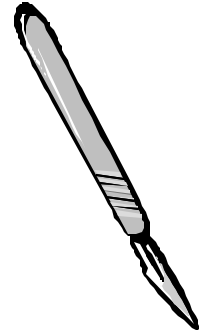


- a. Uses ultrasound machines, magnetic resonance imagers, and other high-tech equipment to help diagnose and treat illnesses and injuries.
- b. Focuses on restoring body movement, cares for patients with chronic pain with work- or sports-related injuries with arthritis or who are recovering from stroke.
- c. Deals with the anatomy, functions, pathology, and treatment of the eye
- d. Helps children and teenagers' psychiatric issues and conditions
- e. Evaluates aspects of health care, delivery, process health and the prevention of disease, or focuses on health problems in developing countries.
- f. Treats conditions like sinusitis and asthma and food intolerances.
- g. Performs physical exams, diagnoses and treats minor and chronic health conditions, and writes prescriptions.
- h. Operates on the brain and the spine and handles cases of brain aneurysms and management of pain and movement disorders among others.
- i. Licensed to dispense drugs. Instructs people how to use medicine correctly. Deals with how and why drugs act the way they do and the implications of various drug treatments.
- j. Alleviates pain and suffering at the end of life.
- k. Coordinates team of social workers, nurses and volunteers.
- l. Specializes in treating the largest and most visible of the body's organs. Examinations can focus on hair, nails, and mucous membranes.
- m. Supervises and plans the care of patients. Makes sure physicians' orders are followed. May give injections and administer fluids.
- n. Manages overall patient health care and decides when to make referrals. Deals with simple things like heartburn to complex things like diagnosing cancer.
- o. Provides information and support to families who have members with birth defects or individuals who may be at risk for a variety of who may be at risk for a variety of inherited conditions
- p. Draws blood from patients for testing purposes. Usually works under the supervision of medical technologists or laboratory managers.
- q. Integrates principles from biochemistry, physiology, and behavior to maintain patient health and assess risk related to diet and exercise.
- r. Performs autopsies and plays Sherlock Holmes every day. Often called upon to testify in criminal investigations.
- s. Deals with diseases like hypertension and coronary artery disease. Main role is to diagnose (using EKGs, stress echos, catheterizations) and treat conditions medically.
- t. Focuses primarily on prevention of oral diseases, treatment of conditions of the periodontium, and oral health education.
- u. Sees many types of patients; a day's cases might range from someone with painful swelling in the abdomen, to lacerations on the arm, to high fever with excessive vomiting, to difficulty breathing.

WHO DOES WHAT?

Who Does What?

Being a doctor is only one of many careers available in medicine. And there's more than just one kind of doctor. See if you can match the kind of health care profession with the right job description on the other activity page. Then see if you can choose which career requires the longest preparation, and which requires the shortest.



Profession	answer	Profession	answer
Dental hygienist		Forensic pathologist	
Ophthalmologist		Public Health specialist	
Allergist/immunologist		Neurosurgeon	
Nurse practitioner		Hospice physician	
Cardiologist		Physical therapist	
Child psychiatrist		Radiology technician	
Dermatologist		Pharmacist	
Genetic counselor		Dietitian	
Emergency room doctor		Phlebotomist	
Internist		Registered nurse	

Questions

Write your answers on a separate sheet of paper.

- 1) When you have filled in all your answers. choose the career in the chart above that you think requires the most training and explain why.
- 2) Choose the career in the chart above that you think requires the least training and explain why.

WHO DOES WHAT? ANSWER KEY

Profession	Answer	Years of Training (After High School)	Profession	Answer	Years of Training (After High School)
Dental hygienist TOTAL = 2 years	S	Two years at a technical college studying dental hygiene for an associate's degree	Forensic pathologist TOTAL = 12 years	Q	Four years of medical school after college plus four years of training.
Ophthalmologist TOTAL= 12 years	C	Four years of medical school after college plus four years of training	Public health specialist TOTAL = 9 years	E	Four years of medical or dental school after college and one year of training
Allergist/immunologist TOTAL= 13 years	F	Four years of medical school after college plus five years of training	Neurosurgeon TOTAL = 15 years	H	Four years of medical school after college plus seven years of additional training
Nurse practitioner TOTAL= 13 years	G	Four years of nursing school after college plus a two-year masters degree	Hospice physician TOTAL= 12-13 years	J	Four years of medical school after college plus four to five years of training
Cardiologist TOTAL = 14 years	R	Four years of medical school after college plus six years training	Physical therapist TOTAL = 1-5 years	B	Minimum four-year college degree in physical therapy; some colleges offer an additional two-year master's degree; no medical school
Child psychiatrist TOTAL = 13 years	D	Four years of medical school after college plus five years of training	Radiology technician TOTAL = 2 years	A	Two-year training program after high school diploma or GEO certificate is earned
Dermatologist TOTAL = 12 years	K	Four years of medical school after college plus one year of dermatology internship and three years of additional residency	Pharmacist TOTAL = 6 years	I	Six years of college study, typically at a college of pharmacy, resulting in a doctor of pharmacy degree
Genetic counselor TOTAL = 6 years	N	Four years of undergraduate study plus two years master's degree in genetic counseling	Registered dietitian TOTAL = 4+ years	P	Minimum of four years baccalaureate degree plus completion of a program in dietetics
Emergency room doctor TOTAL = 11-12 years	T	Four years of medical school after college plus three to four years of training	Phlebotomist TOTAL = 1-2 years	O	One to two years at vocational/technical school or community college
Internist TOTAL = 13 years	M	Four years of medical school after college plus five years of training	Registered nurse TOTAL = 2-4 years	L	Two-year or four-year college programs that are combined with clinical practice in hospitals; master's degree required to teach or specialize.

Activity Answer

The descriptions provided for students represent only one focus of each discipline; like any other job, medical specialties include a variety of duties and responsibilities.

Medical specialists can also be found in a variety of locales, such as doctors' offices, hospitals, academic institutions, public health clinics, industrial plants, and relief agencies, among others. Medical careers also extend into the research realm, where scientists focus on learning how the body works or finding ways to combat disease.

The academic requirements listed are based on averages; more or less schooling may be required depending upon the extent to which a person specializes in a profession or the state requirements the person must meet. However, on average, the career that requires the most training is neurosurgeon (15 years) and the least training, a phlebotomist (1-2 years).